MINUTES

DOE Corporate Technology-Supported Learning Meeting
Rocky Flats Environmental Technology Site
Denver, Colorado
August 12-14, 1997

Attendees

Paul Bakke, Technical Training, RFFO/HRMOD/TGTG
George Cannode, Director of Training, RFFO/HRMOD/TG
Helen Clark, TSL Project Leader, HR-43
Sherida Cobbs, Computer Specialist, INEEL/LMIYCO
Heidi Coblentz, DP Training Coordinator, DP-13
Mary Cunningham, Training Manager, EH-72
Tom Evans, Director, Office of Training and Human Resource Development
H. Steve Giles, Institute Leader, LMES/OR
Richard Holman, Program Manager, INEEL/LMIYCO
Syl Houston, Program Manager, OPM/WMDC
Christine Kinyenje, Research Assistant, ATL International
Patrick Landy, OH-HRD
George Lesko, Training Specialist, ORAU/RFFO
William Lowry, General Engineer, FETC/ESHD
Tanya Luckett, TSL Project Leader, HR-31
Randy Mathis, Training Specialist, RFFO
Linda Media, Employee Development Specialist, DOE-CH
Marcia McElroy, Employee Development Specialist, BPA-CHD-1
Jud Morhart, Project Director, Distribution Education, LANL
Jemelle Padilla, Assistant Director, CTA/ NN-511
Bob Richards, Consulting Technician, LMITCO
Richard Self, RL/OTR
Gaye Scruggs, RFFO
Robbie Smith, CTA/NN-511
David Sweet, Chair DFEB Training, PA-HRD
Tom Welch, Training Specialist, RFFO/HRMOD/TG

August 12- Morning Session

The DOE Corporate Technology-Supported Learning (TSL) Meeting was hosted by George Cannode on August 12-14,1997, at the Rocky Flats Environmental Technology Site. Mr. Cannode gave brief welcoming remarks of appreciation for the participants and promptly introduced Tom Evans, Director, Office of Training and Human Development.

Mr. Evans began his opening remarks by pointing out that the department's corporate training

initiatives budget has declined significantly. More budget cuts are expected. Congress cut $62 million from contractor training budgets and the greatest cut was from EM-Defense ($40 million). The Training and Development Management Council (TDMC) had a meeting and are moving to close SAI-44 and draft a new training and development business plan. There will be a Training and Development Coordinating Group (TDCG) meeting in October and a TDMC meeting in November/December of this year. Mr. Evans pointed out that the strategic plan must be aligned with Secretary Pena's Strategic Plan and the Government Performance and Results Act. Technology-Supported Learning will play an important supporting role in the business plan. In addition, Mr. Evans remarked that the days are over when we could go to Congress for a separate budget line item. But we can continue to invest program funding in these technologies.

Next, Mr. Cannode introduced himself and asked everyone to introduce themselves and state their expectations. The majority of participants were interested in learning from others and sharing resources.

George outlined expectations of the TSL meeting, which were:

- To think corporatively in order to save money;
- Need to have structure, milestones, and measures;
- Discuss the TSL charter;
- To continue networking and reach consensus. Form working groups that will communicate via e-mail to discuss issues, so that at the next meeting the participants will share results.

Ground Rules

Ground rules were presented by the Facilitator Randy Mathis (see Attachment 1)

Business Case Status Report

Tanya Luckett gave an overview of the TSL business case. Among the major topics covered were:

Status

The final TSL business case was distributed to workshop participants, TDMC members, and IM council members. Mr. Cannode has assumed responsibility for leading the TSL program initiative. This week marks the first kick-off meeting for the TSL program initiative activities and implementation of the business case recommendation.

Recommendation of the TSL Business Case

- Adopt a corporate approach to technology-supported learning.
- Adopt a multi-technology solution, which will use a mix of existing technologies across the department.
- Establish and cultivate needed resources to include external and internal partnering agreements, establishments of centers of excellence, in-house course conversion capabilities, and an approved list of vendor products and services.

TSL is a useful tool

- The business case is a live document therefore we should review and update the business case annually to include updating the baseline.
- Reference section 1.21, page1-1. This section identifies the TSL Vision, Statement, and Goals. We will review and update the latter in today's session.
- Reference section 7.0, Recommendation, page 7-1.
  - Section 7.1, identify the approach for a multi-technology solution.
  - Section 7.2, identify the information system that will report to the TSL program. This includes integration with the Clearing House for Training, Education, and Development (CTED) and also the Corporate Human Resource Information System (CHRIS).
  -Section 7.5, recommend specific areas that require development to successfully implement the TSL program.
  - Section 7.7, recommend further investigation of the impact of human factors on the acceptance of the department-wide TSL program.
  - Section 7.8, recommend performance measures be established to assess the yearly status and progress of the corporate approach to TSL program.

Mr. Cannode adjourned the meeting for the afternoon break.

August 12- Afternoon Session

TSL Open Forum

Mr. Cannode asked the participants to give a brief overview with regards to on-going projects and initiatives involving Technology Applications. The following is a summary of these presentations.

George Cannode, Rocky Flats Field Office (RFFO)

- Rocky Flats is currently working with community colleges to develop undergraduate and graduate courses.
- Rocky Flats has CD Rom capabilities and has updated CBTs
- Rocky Flats is developing Web pages for course sign-ups.
- Rocky Flats are currently using Macintosh computers. Therefore they are taking surplus dollars for this year to buy IBM computers for all federal workers.

Rich Self, RL/OTR

- Richland is a PC based environment with an extensive internet support.
- Richland has pentium, multimedia and CD Rom capability. They are currently producing CBT protocols.
- They have partnered with the University of Washington and are developing courses for

their graduates.

- Richland is also trying to get sponsorship for virtual reality.

- Richland is also working on People Soft (CHRIS) which has a training module for DOE and is looking for people to assess the model.
- *Lessons Learned*: People are resistant to CBTs especially if they have never used them; People want to go elsewhere for training instead of using locally developed CBTs; Advertising through the Web is the best medium of communication; Richland saved 60% of training funds by utilizing the expertise of federal workers instead of using contractors.

Steve Giles, (LMES/OR)

- In 1994, Oak Ridge conducted a study on what was the best structure for facilities management. As integration came about they developed a charter on (1) How to avoid duplication and (2) How to establish consistences. This integration eliminated approximately 200 modules on Safety and Health, thus enabled them to be cost effective.
- Oak Ridge has satellites, CD Roms, CBTs, computers, Macs, and PCS.
  In 1994, Oak Ridge became 100% charge back---Everything they did became cost effective.
- *Lessons Learned:* Not all lessons are suitable for one method of delivery; Classroom reschedule is difficult; When dealing with vendors, one needs to consider the discrepancies in vendor rates; Largest drawback is the training community whose jobs are gone because of new technology; It's easy to advertise on the Web site because people can see what courses they have taken. It also eliminates paper, travel, labor, and rescheduling problems.

Richard Holman, INEEL/LMITCO

- The Center maintains the CTED and the Universal Catalogue (UNICAT) which contains training catalogues from various organizations from all over the departments. The purpose of the UNICAT Catalogue is to avoid duplication.
- The Spectrum Newsletter is part of CTED and is primarily used to communicate training activities to fellow colleagues within the training community.

Bob Richards, INEEL/LMITCO

- LMITCO has a lot of learning centers and computers with CD Roms.
- Currently involved in buying CBTs and have installed net based courses. The materials are hard to read but easy to distribute.
- They have bought equipment which has not created a demand, thus indicating media selection problem.

Robbie Smith, CTA

- Due to declining budget, training needs, and attendance, CTA implemented distance learning.
- *Examples of MultiMedia are:* Audio/ video tapes, video teleconference, correspondence

courses, and electronic training.

- No one distance learning technology is the answer, often an integration of these technologies is most effective.

- *ITV is*: the use of one-way video, two-way audio, satellite transmission, live transmission, live television and interactive training.
- *Why ITV:* Offers instructor/student and student/student exchange; Reaches large student populations; Provides immediate feedback; Equals or surpasses traditional learning.
- *History:*1994-CTA produced first interactive television with Hewlett Packard, broadcast from Cupertino, California; 1995-Completed construction of on campus state-of -the-art broadcast studio.
- *Advantages:* Trainers don't have to travel to Albuquerque; Number of students trained via ITV e.g., (144) compared to classroom e.g., (20) per iteration; With 22 downlinks operational in year two, a total of 440+ DOE students can attend each training courses presented, as opposed to 20 in a classroom environment. This accelerates training delivery by 200% per course offered; Currently they have 23 connections at different sites in the USA and the IRS is paying for the them; The course time is reduced by half.
- *Disadvantages*: Training of trainers to become professional communicators is challenging and expensive.

Jud Morhart, Los Alamos National Laboratory (LANL)

- LANL brought in over 3,150 distance learning classes via satellite and microwave between August 1996 and July 1997.
- LANL has the capability of bringing in distance learning via microwave; C-band, Ku-band, and digital satellite downlinks.
- Sources for distance learning at LANL includes: University of New Mexico, New Mexico State University, Waste-management Education Research Consortium, and National Environmental Education and Training Network.
- LANL has two video-teleconferencing units for video-teletraining. One unit is configured in a classroom to use primarily for video-teletraining.
- LANL has the capability to deliver distance learning through a satellite uplink at the University of New Mexico and through the video-teleconferencing equipment.
- *Advantages:* Currently developing CD Rom for their own training needs and are willing to share with others.
- *Disadvantages:* Communication can be slowed if one person has a slow computer; People are not computer literate enough for the computer capabilities; and the Web Page needs constant updating otherwise it loses its purpose.

Bill Lowry, FETC

- *Background:* Prior to 1993 all training was "live"; ES&H events totalled 24+annually; Target audience ranged from 40-700; and Training averaged 50 hours in classroom.
- *Problems encountered*: Increased amount of employee time spent in training; Increased no-show rate (30%); Increased administrative time (rescheduling/tracking); Increased

instructor costs (repeat training); Alternative work schedules/project; and Diminished training resources (classrooms).

- *Solution:* Developed a CBT Network which features the following: Automatic student tracking and scoring; Immediate student feedback on tests; Employee can ask questions via electronic form; Administrative control of student access to CBT modules; Student bookmarking capability; Total "Time-in" recording; and Multiple reports.
- *Benefits:* Administrative support reduced; Live instructors were eliminated; "No-shows" reduced to +-3%; Student training time reduced; Supports alternative work schedules/projects; and People love it because they can take courses any time. The only drawback with CBTs is that once the audience gets sophisticated, they are not willing to go back to the old system of training.

Mr. Cannode adjourned the meeting for the day.

August 13- Morning Session

Items for Discussion, Brainstorming and Formation of Work Groups, as required

Mr. Mathis initiated a discussion on the TSL Charter Development--purpose statement, roles, organization, structure, and other issues related to the TSL program

- *Purpose Statement:* Participants unanimously voted to change the purpose statement to read " The purpose of the TSL Program Committee is to reduce cost and to improve learning effectiveness through the corporate wide implementation of TSL"

- Tanya Luckett, Helen Clark, Paul Bakke, and Mary Cunningham volunteered to develop the charter.

- *Roles/Organization Structure*: Woody Hall and Tom Evans were identified as the champions for the TSL Program. George Cannode was chosen to be the Training Representative Leader. He will discuss the identification appointment of an IM Representative. Helen Clark was appointed IM Advisor and Tanya Luckett, Training Advisor.

- *Other issues*: Need to build infrastructure to reduce cost; Provide guidance, establish protocols, methods, and processes; Appoint teams to investigate how to cut costs; and send minutes and memo to all field site managers to inform them about the TSL meeting.

Next, Mr. Mathis (facilitator) outlined six major initiatives. A list of brainstorming issues were grouped together and included as part of the appropriate major initiatives (refer to Attachment 2) Mr. Mathis established working groups according to the six initiatives. Specifically, the groups

were asked to give a brief overview of their topics. In addition, groups were also asked to determine whether the initiatives met supported the TSL Vision, Mission, and Goals (refer to Attachment 3). The following is a list of the six initiatives:

Team 1
- Infrastructure (Technology) and TSL Standards

Team 2
- Cost Savings

Team 3
- Baseline, Products, Duplication

Team 4
- Barriers

Team 5
- Partnering Internal/External

Team 6
- Systems Approach to TSL (project management)

Mr. Cannode adjourned the meeting for the afternoon break

August 13- Afternoon Session

Continuation of Discussion, Brainstorming, and Group Presentations

Mr. Mathis facilitated the group presentations and the following is a summary of presentations for the six groups

Team 1- Infrastructure (Technology) and TSL Standards
Scope:

- Team members established the need to identify and develop TSL standards that would enable uniform delivery of cross cutting training and education via advanced training technologies across the department.
- Standards/criteria should promote the sharing of resources, interoperability, and be able to take advantage of training technologies.
- Infrastructure (hardware/software): Items 13 and 63 need to be further evaluated.

Supports TSL goals: # 2,5, and 9

Team 2- Cost Savings

Scope: Set up concepts, guidelines, procedures for projecting and accounting for cost savings. Assist in locating low hanging fruit based on cost picture. Work with charge back potential.

Suggested approach/policy:

1. Before a project is done it should have a cost/benefit analysis. This is tied to media selection.
2. After the project is done came back and capture actual savings.

Possible sources of cost savings:

1. Same work, but cheaper (e.g. different supplier at cheaper costs)
    A. Actually have savings left over. Can take savings and re-invest.
    B. Involuntarily maintain capabilities when dollars are cut.
2. More (Redesigned) work for same dollars.
3. Capital investment (cost more first year but over life of project comes in much cheaper).

Note: First two do not require the up-front money. These work best for quick wins because they are cheap.

Low hanging fruit and *pay back time* frames are very closely related. The low hanging fruit is that which has very short pay back time--very low investment (can be implemented immediately with little work). These can make good demonstration (pilots) projects to prove the concept, get buy-in from those with funding. Baselining is closely connected in that it can identify the low hanging fruit.

Metrics must be defined as the types of costs that would be accrued without TSL and can be saved. Don't allow the cost savings to contain things that will run up red flags. Savings and costs need to be accounted for fairly. Can't be 100% in accounting for savings and overlook real costs. Number estimates for travel, salaries, etc. should be realistic. Any projection is defendable and defense is included.

Pilots. Underutilization of resources is also closely related to low hanging fruit. Big savings can be achieved by utilizing what is already there and measuring the results.

Left over funds should be reinvested into a pool.

Tasks for the team:

The whole corporate approach foundation must support this concept of non-duplication and seek

cheaper ways to:

- Calculate savings--any standard numbers. Concise but defendable.
- Discriminate in Catalogs--most cost-effective means meeting needs. Ask cooperation of all training offices to adopt the "cheapest" means. There's a need for quality control to ensure that the courses don't degrade.
- Tie back to Baselining to find opportunities.
- Create a system that collects savings data.
- Establish site licensing.

Artificial side-effects:

- TSL may increase number of people going to training that don't need it. Some may be taking courses for professional development purposes only.

- On the other hand, many costs do really go way down-- web based record keeping costs went from $9 million to $2 million at LMES. After payback, "profits" should be used for development. Have a variance account as an investment.

- Very closely tied to business strategy for funding (e.g. fees for multimedia upgrading, software upgrades). Universities do this with mandatory computer fees.

- Charge back of some system would allow identification in a way that is measurable.

- Incentives for saving can/will work. "Give you half the savings as an award fee." This is a potential barrier for managing the incentives.

- Note that non-quantitative or categorical/nominal counting can still be valuable e.g. number of courses eliminated is still valuable to report even if you can't give a dollar figure to it.

Supports TSL goals: #6, 7, 9, and 10

<u>Team 3- Baseline, Products Duplication</u>

Scope: Conduct a DOE baseline of available products and capabilities, determine overlap and make this information generally known. Compare this information to needs assessment information and determine which needs can be met and can not be met with existing resources.

Problem issues:

- Not able to address pilots. They are a source of products. A team will have to be assigned to identify pilots.
- Human factor: Didn't understand how it was included in baseline.

Key items identified:
Needs/issues
Service requests
Distribute Information
Pilots-source of products
Initiative that partially supports UNICAT (universal catalog)

Supports goals: # 1, 4, 7, 9, and 10

Team 4- Barriers

Scope: Identify activities, processes, regulations, and technologies that impede the development and implementation of the Technology-Supported Learning program.

Barriers identified are as follows:

- Equipment, software, services, process, LCD lowest common denominator - (systems interface/utilization)
- Licencing, intellectual property, pirating, liability, contractual, general counsel support
- Computer security, information security, encryption, fire walls
- Technology interface
- Ease of use, common look, feel design, ergonomics, language (second language, literacy), computer literacy, disability
- Investment of new technology, use of new technology, instability of systems and personnel, return on investment
- Source code, site customization, courses are not really crosscutting, training to reg us local best management practices?
- Lessons learned
- Disclosure, control, intellectual property, politics, lack of performance based training
- Reluctance to make new investment, unwilling to use present technology
- Over-utilization, reports

- Out of the scope of the group

Supports TSL goals: #1, 5, 8, 9, and 10

Team 5 - Partnering

Partnering: A long term commitment between two or more organizations for the purpose of achieving specific business objectives by maximizing the effectiveness of each participant's resources.

Scope: In order to reduce redundancies and cost, we will establish internal and external partnering agreements to develop and deliver training and education learning activities.

Message for identifying and pursuing partnering opportunities:
Using: e-mail list servers
Home pages
Phone
Internet
Web Search

Contacts for possible partners:
Internal DOE Organizations
External Organizations
Educational Institutes
Federal, State and Local Agencies
Nationwide Newsletters
Nationwide Training Forums (America)
Society for Training and Development
Government Alliance for Training and Education (GATE)

Types of partnering opportunities to obtain:
Sharing courses, facilities and capabilities
Use of facilities, equipment, studios and uplinks
Develop relationships with Centers of Excellence
Technical Expertise/SME's
Lessons learned
Try to partner after or while needs are determined.
Ensure Partnering Agreements are complex-wide.
Partnering Policy to disseminate resources and materials obtained through partnering agreements - where does policy belong - (i.e. TSL Committee Charter, Guidance Document, DOE Order, ets.)

Supports TSL goals: #1, 3, 4, 7, 8, 9, 10, and 11

Team 6 - Systems approach to TSL

Analysis of Brainstorming Issues

- PERT Chart: Define the different types/categories of training and a model to pilot the appropriate media. (supports TSL goal 3)

- Organization of Teams: Committee evaluate topics/priorities and assign teams against the task (equal distribution/representation).

- Communication to DOE: Adequate/Appropriate dissemination of information on what is being done by the committee /teams/sites. Upward flow of information.
- Funding: Ensure departmental element participation/committee to support the committee.

- Performance Measures

- Recommend move to Standards:
  - Internal to evaluate committed progress
  - Committee has control over deliverable
  - External organizations measure participation

- Path forward: Establish charter, secure support through demonstrated cost savings, acquire funding for initiatives.

- Legal: Current directives, impact - are we in accordance with Program missions and functions? (supports TSL goal #2)

- Schedule milestones: Schedule short term (6 months) activities to display the value/cost savings/results of the activities. (supports TSL goal #3)

- Record Keeping: Maintain records of all activities/ transactions.

- Prioritization: Identify short term cost savings for the projects and establish Long term planning. (supports TSL goal #7)

- Consistent Team Participation: Distribution of meeting minutes/information which includes language on committed funding - request upper management.

- Interdependence with other initiatives- 50% to legal, 50% to partnering.

- Distribution of work/projects
  How the taskings are allocated/who determines?

- Corporate Sponsors: tied to funding

- Metrics: Determined by action teams/approved by the committee.
  (supports TSL goal #6)
  Reporting: Action teams report to committee.

- Acronyms/Jargon: Use business case terms/update revise as necessary.

- Bench marking: Review business standards/other successful organizations - how did they succeed? (Supports TSL goal # 6)

Supports TSL goals: #2 and 3

The following TSL Issues were identified during the Group Presentations

- Continue to develop business case --update annually

- Use of media selection and human factors

- CD ROM block error rates MAC vs Win platform

- Authoring software
  CBT Protocols

- Satellite dish time

- CBT over Internet network

- Marketing plan for using technology

- In house CBT development cheaper

- Duplicate capabilities

- Standardized authorware for CBT

- Impact of site closure

- Communication of available training

- Trainers need to be knowledgeable of technologies

- One size does not fit all - Media selection very important

- Licensing agreements
- Security requirements
- Records and distribution
- Identify other catalog links
- Under-utilization of up-link
- Training needs to be current
  Legal ramifications?
- TSL standards
- Steps to success
  How do we get there?

After the presentations, Mr. Cannode asked participants to write their names below the team(s) of their choice, which were listed on the board. The teams would communicate via e-mail and should have some deliverables within six weeks. The teams are as follows:

Team 1- Infrastructure, TSL Standards
Bob Richards
Richard Self
Jud Morhart

Team 2- Cost Savings
Paul Bakke
Steve Giles

Team 3- Baseline, Duplication
Marcia McElroy
Richard Holman
Tim Landy

Team 4 - Barriers
Bill Lowry
Jud Morhart
Tom Welch

Team 5 - Partnering

Heidi Cablentz
Robbie Smith
Linda Media
Sherida Cobbs

Team 6 - Systems Approach to TSL
Richard Holman
Jemelle Padilla
Tanya Luckett
Paul Bakke
Bob Richards

Conclusion of the day

Ohio Field Office was voted as the test-bed-pilot site for the TSL Program.

Mr. Cannode asked each team to choose a team leader.

Mr. Cannode concluded the day by outlining activities for the next day-- each team would be asked to report on what they had presented the previous day.

Mr. Cannode adjourned the meeting for the day

August 14- Morning Session

Video Conference

Additional Attendees for the Tele-Video Conference

Name	Office
Jack Craig	EH
Cheryl Crosswell	SW Power
Gary Schmidt	Ohio Field Office
Judy DeGregorio	Oak Ridge Field Office
Nick Delaplane	EM
Sophia Kitts	ORISE
Jeanie Lozoya	Albuquerque Field Office

Deborah Manning	NV
Linda Naney	ORISE
Steve Yaxxie	Albuquerque Field Office
Elaina	Oakland Field Office
Marie	Chicago Field Office
Lois	DP HQ

Mr. Cannode introduced everybody and gave a brief summary of the past two-day activities. Tanya Luckett reviewed the Vision, Mission, and Goals of the TSL Program. All the six teams reported on the scope and results from the working groups.

The following is a list of issues identified during the teleconference:

- There's a need for more data from the training community on what customers want.
- Have to reach out to communities and universities to see what has been developed that can be used.
- There's a need to advertise what we have via CTED.
- There are no resources to provide traditional methods of training.
- There's already a lot of CDS on similar topics. These might be cheaper to use than developing new ones.

Gary Shmidt (Ohio Field Office) had the following to share:

- Ohio Field Office has implemented a new medium of training through the use of distance learning. Initially, they were spending $1000 for each student but are now spending $400 for each student.
- Ohio Field Office has also set a computer lab facility to work on program planning.

Closing Comments

Mr Cannode requested that volunteers to support the TSL program committee sub-teams contact him within the next couple of weeks.

Mr. Cannode announced that the next tentative TSL meeting would be televised on Tuesday, October 7, 1997.

Mr. Cannode adjourned the TSL meeting at 10:00 A.M.

BRAINSTORMING ISSUES

1. Pert chart on training
2. Catalog inventory
3. Cost saving projects
4. External networking/utilize external resources
5. Organization of teams
6. Baseline
7. Communication to DOE
8. Site license of commercial
9. Short term goals & successes
10. Training attendance problems/no shows
11. Funding methodology
12. Available resources
13. Infrastructure needs
14. Corporate wide costing examples
15. Entrepreneurship
16. Broken systems
17. Performance measures
18. Publishing successes
19. Path forward
20. Lessons learned from other agencies
21. Legal ramifications
22. Increase level of knowledge
23. Quality assurance training products
24. Product consolidation
25. Partnering w/labs
26. Schedule milestones
27. Security
28. Reporting of progress
29. Site differences vs commonalities
30. Record keeping
31. Prioritization schemes
32. Firewalls
33. Consistent team participation
34. Interdependence w/other initiatives
35. Human factors issues
36. Marketing
37. Consensus on authorware
38. Evaluate criteria
39. Impact of site closure
40. Office standards

42. Advertise courses outside DOE
43. Distribution of work/projects
44. What kind of training do we really need? common courses
45. Payback time frames for projects
46. Different levels of technology
47. Local autonomy NIH not invented here
48. Pilots
49. relationships w/centers of excellence
50. pitfalls to avoid
51. technical expertise
52. corporate sponsors
54. involvement of outside vendors
55. low hanging fruits
56. needs assessment
57. knowledge baseline technology literacy
58. baseline
60. IM Guidance item
61. database of what is out there
62. metrics & reporting
63. under-utilization of existing resources
64. acronyms/jargon
65. corporate policy
66. bench marking

Clusters of brainstorming issues among the six initiatives

1. Infrastructure technology, media selection, use of internet
   13, 27, 30, 32, 35, 46, 60, 63,
   TSL Standards
   8, 23, 37, 38, 40, 60

2. Cost Savings
   3, 14, 45, 48, 55

3. Baseline
   24, 29, 61, 2, 6, 12, 16, 20, 35, 44, 46, 55, 56, 58,61,
   Products Duplication
   9, 18, 30, 48, 55

4. Barriers
   10, 16, 21, 27, 32, 35, 39, 47, 50, 54, 57, 63, 64

5. Partnering in/outside
   4, 15, 20, 22, 25, 42, 49, 51, 53, 54, 52, 57

6. System Approach to TSL (project management)
1, 5, 7, 11, 17, 18, 19, 21, 26, 28, 30, 31, 33, 34, 36, 43, 52, 62, 64, 65, 66

DOE CORPORATE TECHNOLOGY-SUPPORTED LEARNING
VISION, MISSION, AND GOALS

VISION

Learning needs in the Department of Energy will be efficiently and effectively met through a mix of traditional instructional methods and the use of compatible technology-supported learning tools, which will continually improve learning effectiveness.

MISSION

Systematically identify and analyze the Department's learning needs and, where TSL is determined to be the medium, facilitate the identification and development of technology-supported learning-based solutions and instructional methods.

GOALS

1. Identify equipment, technology, and other resource requirements and baselines for the effective implementation of technology-supported learning.

2. Evaluate the readiness of the Department and the policies and standards required to optimally harness technology-supported learning.

3. Identify instructional strategies and methods that will improve the quality and effectiveness of technology-supported learning activities.

4. Identify learning activities that have cross-cutting applicability that would make them candidates for implementation via technology-supported learning approaches.

5. Develop standards for technology-supported learning format, structure, and process that will promote uniformity, reduce duplication of effort, and improve usefulness.

6. Identify evaluation criteria and parameters to measure the instructional effectiveness and cost savings associated with technology-supported learning as an alternative to conventional learning activity delivery.

7. Conduct pilots to validate system readiness, demonstrate the effectiveness of technology in improving learner outcomes, and evaluate cost vs. performance.

8. Develop a cooperative relationship with other government agencies, the private sector, universities, laboratories, and other educational institutions involved in technology-supported learning, to share resources, products, and lessons learned.

9. Optimize the use of existing technology-supported learning facilities and capabilities (e.g., Central Training Academy, Energy Training Center, TRADE, and contractor facilities).

10. Eliminate redundancies in cross-cutting training and education, course development and delivery to reduce costs, increase efficiency, achieve the highest quality courses, and establish Department-wide consistency.

11. Provide optimal training and educational opportunities throughout the DOE Complex

to maintain technical competence.